New Mexico Agriculture, Food & Natural Resources Course Framework

Veterinary Science / Veterinary Technician (0164)

Suggested Course Length: 180 Days

AFNR Pathway: Animal Systems (AS), Biotechnology Systems (BS), Agribusiness Systems (ABS)

Prerequisite: Agricultural Science (0132), Introduction to the Science of Agriculture (0133), or Science of Small/Large Animals Recommended.

Instructional Design Philosophy

Veterinary Science prepares students for entry-level employment and post-secondary study in veterinary medicine, veterinary assisting, animal health, animal care, laboratory animal science, and animal biotechnology. The course emphasizes technical skill development, animal anatomy and physiology, disease management, laboratory procedures, sanitation, clinical examinations, and veterinary office operations.

The SAE serves as the backbone of instruction. Students should develop a Veterinary Science, Companion Animal, Animal Health, Laboratory Animal, Livestock Health, Placement, Research, or Veterinary Assistant SAE. Every unit should contribute to a veterinary skills portfolio documenting clinical competencies, certifications, and career preparation.

Course-at-a-Glance

Quarter	Units	Days
Q1	Units 1-3	45
Q2	Units 4-6	45
Q3	Units 7-9	45

Quarter	Units	Days
Q4	Units 10-12	45

Unit 1: Introduction to Veterinary Science Careers

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Veterinary Profession Overview	AS.04 Career Exploration	Veterinary Career Report	AVMA Resources	Veterinary SAE
Veterinary Assistant Responsibilities	AS.04 Career Preparation	Career Portfolio	Veterinary Clinics	Placement SAE
Trends in Animal Science	AS.01 Animal Agriculture Systems	Industry Trends Analysis	Industry Publications	Career Development

Unit Assessment

- Veterinary Career Portfolio
- Industry Trends Report

Unit 2: Animal Industry, Breeds and Society

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Animals in Society	AS.01 Animal Industry Applications	Animal Impact Report	Animal Welfare Organizations	Companion Animal SAE
Animal Breeds	AS.07 Animal Production Systems	Breed Identification Project	Breed Associations	Livestock SAE
Scientific & Laboratory Animals	AS.07 Specialty Animal Systems	Laboratory Animal Investigation	Research Institutions	Research SAE

Unit Assessment

- Breed Identification Practicum
- Animal Industries Portfolio

Unit 3: Veterinary Terminology and Communication

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Veterinary Terminology	AS.05 Animal Health Systems	Terminology Assessment	Veterinary Textbooks	Veterinary SAE
Medical Abbreviations	AS.05 Clinical Procedures	Medical Terminology Exam	Vet Tech Resources	Career Preparation
Scientific Language	CRP.04 Communication Skills	Medical Communication Project	Veterinary References	Clinical Documentation

Unit Assessment

- Veterinary Terminology Examination
- Medical Communication Portfolio

Unit 4: Animal Handling and Restraint

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Animal Handling Principles	AS.08 Animal Welfare & Behavior	Animal Handling Demonstration	Veterinary Training Resources	Animal Care SAE
Dog and Cat Restraint	AS.05 Animal Care Systems	Restraint Practicum	Veterinary Clinics	Companion Animal SAE
Exotic Animal Restraint	AS.07 Specialty Animal Management	Restraint Evaluation	Exotic Animal Resources	Specialty Animal SAE

Unit Assessment

- Animal Handling Skills Assessment

Unit 5: Anatomy and Physiology

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Anatomy & Physiology Terms	AS.05 Animal Health Systems	Anatomy Vocabulary Exam	Veterinary Anatomy Texts	Veterinary SAE
Skeletal System	AS.05 Animal Structure & Function	Skeletal Identification Lab	Animal Models	Research SAE
Muscle, Respiratory and Nervous Systems	AS.05 Physiology Systems	Systems Portfolio	Veterinary Science Curriculum	Animal Health SAE

Unit Assessment

- Anatomy Laboratory Practical
- Physiology Portfolio

Unit 6: Animal Nutrition and Reproduction

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Meeting Nutritional Needs	AS.03 Animal Nutrition	Feed Analysis	Feed Industry Resources	Animal Production SAE
Animal Digestion	AS.03 Digestive Physiology	Digestion Lab	Animal Science Curriculum	Research SAE
Reproductive Systems	AS.06 Animal Reproduction	Reproductive Systems Report	Reproduction Curriculum	Breeding SAE
Reproductive Technology	AS.06 Reproductive Technologies	Technology Analysis	Industry Resources	Biotechnology SAE

Unit Assessment

- Nutrition and Reproduction Portfolio

Unit 7: Genetics and Biotechnology

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Genetics Principles	AS.06 Genetic Principles	Genetics Activity	Genetics Curriculum	Breeding SAE
Molecular Biotechnology	BS.03 Biotechnology Applications	Biotechnology Research	CASE Biotechnology	Research SAE
Animal Breeding Programs	AS.06 Genetic Improvement Systems	Breeding Plan	Breed Associations	Animal Enterprise SAE

Unit Assessment

- Genetics Portfolio
- Breeding Program Design

Unit 8: Clinical Procedures and Animal Care

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Patient Examination	AS.05 Animal Health	Examination Practicum	Veterinary Clinics	Veterinary SAE
Clinical Examinations	AS.05 Health Assessment Systems	Clinical Skills Evaluation	Industry Guides	Placement SAE
Applying Bandages and First Aid	AS.05 Emergency Animal Care	First Aid Demonstration	Veterinary Manuals	Animal Care SAE
Medication Administration	AS.05 Treatment Procedures	Medication Simulation	Veterinary Resources	Veterinary Assistant Skills

Unit Assessment

- Clinical Skills Assessment

Unit 9: Veterinary Hospital Operations

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Hospital Procedures	AS.05 Animal Care Systems	Clinic Operations Plan	Veterinary Hospitals	Veterinary SAE
Disease Control Procedures	AS.05 Biosecurity & Health Management	Biosecurity Audit	Veterinary Publications	Animal Health SAE
Safety and Sanitation	AS.05 Clinical Safety Practices	Sanitation Certification	OSHA & Veterinary Resources	Placement SAE
Sterilization Techniques	AS.05 Infection Control	Sterilization Practicum	Veterinary Equipment Resources	Clinical Skills

Unit Assessment

- Veterinary Hospital Operations Portfolio

Unit 10: Veterinary Diagnostics

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Laboratory Techniques	BS.01 Scientific Investigation	Laboratory Skills Assessment	Veterinary Lab Manuals	Research SAE
Diagnostic Laboratory Procedures	AS.05 Diagnostic Systems	Diagnostic Procedure Portfolio	Veterinary Resources	Veterinary Science CDE
Urinalysis	AS.05 Clinical Diagnostic Procedures	Urinalysis Lab	Veterinary Clinics	Clinical Skills SAE
Radiology	AS.05 Diagnostic Imaging Systems	Radiology Interpretation Activity	Veterinary Imaging Resources	Career Development

Unit Assessment

- Veterinary Diagnostics Portfolio

Unit 11: Diseases, Parasites and Animal Health Programs

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Infectious Diseases	AS.05 Disease Management	Disease Identification Portfolio	Veterinary References	Animal Health SAE
Nutritional Disorders	AS.03 Animal Nutrition	Disorder Case Study	Extension Resources	Production SAE
Internal and External Parasites	AS.05 Parasite Management Systems	Parasite Investigation	Veterinary Diagnostic Resources	Livestock SAE
Disease Eradication Programs	AS.05 Disease Prevention Programs	Eradication Plan	USDA APHIS Resources	Animal Health Careers

Unit Assessment

- Disease and Parasitology Portfolio

Unit 12: Veterinary Science Capstone

Length: 15 Days

Course Competency	AFNR Performance Indicator	Sample Measurement	Teacher Resources	SAE/FFA Connection
Clinical Veterinary Skills	AS.05 Animal Health Systems Integration	Clinical Skills Portfolio	Veterinary Mentors	Veterinary SAE
Animal Health Management	AS.03, AS.05	Comprehensive Animal Care Plan	Veterinary Resources	Animal Health SAE
Veterinary Business Operations	ABS.01 Business Operations	Veterinary Practice Analysis	SBA Resources	Entrepreneurship SAE
Veterinary Communication	CRP.04 Communication Skills	Client Communication Project	Veterinary Clinics	Career Preparation

Capstone Assessment

Students develop and present a complete **Veterinary Science Portfolio** including:

1. Veterinary Career Plan
2. Terminology Certification
3. Anatomy & Physiology Portfolio
4. Animal Nutrition Project
5. Genetics & Biotechnology Investigation
6. Clinical Skills Documentation

7. Hospital Procedures Portfolio
8. Diagnostic Laboratory Activities
9. Disease Prevention Program
10. SAE Documentation and Reflection

SAE Backbone Model

Quarter	SAE Milestone
Q1	Establish veterinary science or animal health SAE
Q2	Complete anatomy, physiology, nutrition, and reproduction projects
Q3	Develop clinical skills and veterinary hospital competencies
Q4	Complete diagnostics, disease management, and capstone portfolio

End Goal

Every student completes a documented:

- Veterinary Science SAE
- Veterinary Assistant SAE
- Animal Health SAE
- Companion Animal SAE
- Livestock Health SAE

- Research SAE
- Placement SAE

while developing competencies in:

- Veterinary Terminology
- Animal Handling & Restraint
- Anatomy & Physiology
- Animal Nutrition
- Reproduction & Genetics
- Biotechnology
- Clinical Procedures
- Diagnostics
- Disease Management
- Veterinary Hospital Operations

This course serves as New Mexico's advanced Veterinary Science pathway course and provides preparation for Veterinary Science CDEs, veterinary assistant certification pathways, animal health careers, postsecondary veterinary technology programs, and Animal Systems career pathways.